

Dainik Bhaskar ND, 12.03.2014, P-11

**खूब**

## आईआईटी खड़गपुर के इंजीनियरों ने बनाया कुपोषण से बचाव के लिए थेरोपटिक फूड

इंडियन इंस्टीट्यूट ऑफ टेक्नोलॉजी, खड़गपुर के तीन फूड इंजीनियरों ने पांच ऐसे थेरोपटिक फूड्स का फॉर्मूला तैयार किया है जो कुपोषण से बचाव में मदद करेंगे। प्रिंसिपल इन्वेस्टीगेटर एच एन मिश्रा और पीएचडी छात्रों राकेश कुमार राजगीर और डैनी शाजी की टीम ने यह फॉर्मूला प्रोडक्शन के लिए इंडस्ट्रियल सेक्टर को दिया है। इन फूड्स के सौ ग्राम में 500 से 550 किलो कैलोरी एनर्जी मिलेगी। इनमें मौजूद विटामिन्स और मिनरल्स की मात्रा भी यूनिसेफ के मापदंडों के अनुरूप है। भारत में करीब 80 लाख बच्चे गंभीर कुपोषण के शिकार हैं। तीन साल से कम उम्र के करीब 46 फीसदी बच्चों का उम्र के अनुरूप शारीरिक विकास नहीं होता जबकि 47 फीसदी बच्चे अंडरवेट हैं।

# IIT KGP's 3 engineers develop therapeutic foods to combat malnutrition

Tuesday, March 11, 2014 08:00 IST

Libin Chacko Kurian, Mumbai

To combat malnutrition in children, three food engineers from the Indian Institute of Technology, Kharagpur (IIT KGP) - H N Mishra (principal investigator) and Ph D students Rakesh Kumar Rajgir and Danie Shajie - developed the formulations for five inexpensive ready-to-eat therapeutic foods and transferred these to the industry for mass production.

Three of these are peanut-based, and one each is potato- and Bengal gram-based. The details of other ingredients were not disclosed, owing to a confidentiality agreement inked with the industry. A hundred grams of these foods would provide 500-550 kcal energy and the vitamins and minerals as prescribed by United Nations Children's Fund (UNICEF) for children suffering from severe acute malnutrition (SAM) in India.

With an estimated 8.1 million children suffering from SAM, India is one of the countries worst affected by malnutrition. The product formula and process technology has been transferred to GCPL, New Delhi, for commercial production. The product would be produced in a ready-to-eat paste form, packed in pouch/tube and ready for pilot scale unit by June.

"The easily-digestible foods will provide enough energy, vitamins and proteins to SAM-sufferers as prescribed by UNICEF. All the foods will be in the ready-to-eat form for easy consumption by the affected children and cheap. They have been developed using peanut, potato and Bengal gram as its primary ingredients," said Mishra, professor, Agricultural and Food Engineering Department, IIT, Kharagpur.

"A pilot scale unit compliant with good manufacturing practices (GMP) and having a production capacity of 100kg per day is being installed for the demonstration of the product and technology. It is expected that the unit would be ready by June 2014," he added. UNICEF's website said, "Malnutrition is more common in India than in Sub-Saharan Africa. One in three malnourished children in the world lives in India."

"In India, around 46 per cent of all children below the age of three are too small for their age, 47 per cent are underweight and at least 16 per cent are wasted. Many of these children are severely malnourished. Malnutrition in early childhood has serious, long-term consequences because it impedes motor, sensory, cognitive, social and emotional development," it added.

<http://www.fnbnnews.com/article/detnews.asp?articleid=35155&sectionid=1>

## IIT Bombay to launch Rs 100-crore research park in July

By Draupadi Rohera | Posted 1 hour ago

- See more at: <http://www.mid-day.com/articles/iit-bombay-to-launch-rs-100-crore-research-park-in-july/15154073#sthash.KJUtyBz.dpuf>

Powai valley, which makes news only when there is a leopard sighting, is about to undergo a huge shift. In the next decade or so the region may emerge as the country's hotspot for entrepreneurial activity generating an endless supply of new technologies, new companies and new wealth. Come July and the Indian Institute of Technology Bombay (IITB) will launch its ambitious Entrepreneurship Centre and a sprawling R 100-crore Research Park that is expected to give a fillip to the start-up energy coursing through its environs.



*Hotbed of ideas: IIT-B is seen as an equivalent to Silicon Valley*

A walk down Powai avenue and there is no mistaking that the stage is set for a churning. Coffee shops have been invaded by the tech brigade, whose conversations steer around start-ups and nanotechnology. On the IIT campus too, enterprises are sprouting and attitudes changing. Twenty-two and 23-year-olds who believe anything is possible are starting ventures in rooms rented from the institute. Plus the recent success of companies like Housing.com and Ola Cabs, which are start-ups launched by former IITians, has thrust Powai into the limelight and given it the identity of a start-up hotbed.

### **Generous donations**

Tapping into this frenzy, IIT-B's Desai Sethi Centre for Entrepreneurship has received a generous fund of R 6 crore from Syntel co-founders Bharat Desai (1975 IIT B alumnus) and Neerja Sethi under the aegis of the DS Foundation (Desai Sethi Family Foundation). Another R 100 crore grant is expected from the Human Resources Development Ministry for the establishment of the Research Park. IIT itself will pump in R 5 crore for the facility.



*Fostering talent: Bharat Desai, co-founder & chairman, Syntel*

“The idea is to develop the next generation of business leaders,” says Prof Devang Khakhar, Director, IIT-B. “The new facility will enable IITB to become the nucleus of entrepreneurship in the Powai Valley, similar to the role played by Stanford University in the Silicon Valley and MIT in Route 128.” Route 128 is a High Technology industry highway that developed around Boston, Massachusetts.



*Bridging the gap: Prof Milind Atrey. Pic/Prashant Wayande*

It may be recalled that from Hewlett-Packard to Google, from Apple to Intel — the many start-ups created in Silicon Valley came out of the special eco-system that was prevalent: Silicon Valley is a unique amalgam of academia, private sector and the US government’s research investment coupled with a population of entrepreneurs. But in all this Stanford University’s role as an incubator of technology is clear. In the last 50 years the University faculty and students have launched more than 1200 companies. Today more than 50 per cent of Silicon Valley’s product comes from companies of Stanford alumni.

### **Replicating success**

And places around the world have tried to replicate the Valley’s success by creating start-up clusters of their own. IIT’s Entrepreneurship and Research Centre is one such effort. “The trigger already exists on the campus — students are incubating their ideas at the Institute’s Incubator. Only we need to leverage it now,” says Prof Anand Kusre, head of the IIT Entrepreneurship Cell.



*Green Thinking: Indian Institute of Technology, Bombay, at Powai*

While the infrastructure for the Centre is in place, the over 2 lakh sq ft area Research Park that will house 200 research and development units of private companies and corporates on the periphery of the IIT campus is in progress.

According to Bharat Desai, founder of Syntel, IIT has always been a hotbed for innovative thinkers and the centre offers a new channel to convert breakthrough ideas into viable business ventures. “It’s going to be different from what is happening at cutting edge business schools in the country in that it will have technology as its base.”

Emerging technologies like Nanotech, Biotech, Materials and Green Economy will get a thrust, says Prof Kusre.



*Hear, hear: SensiBol being demonstrated. PIC/Prashant Wayande*

“Prototyping facilities and proof-of-concept testing will enable students to convert their ideas on paper into tangible products and services. Lab facilities will help to test and validate their concepts”.

Moreover, for the first time IIT will throw open its programmes to outsiders as well. Two new programmes — a B Tech Minor in Entrepreneurship for undergraduates and a certificate programme for a PhD in Entrepreneurship — will be announced shortly.

### **Fresh ideas**

The ambitious Research Park that will house R and D units of private companies incubating on fresh ideas will encourage a vibrant give-and-take between the institute, the students and the industry. “Corporates and industry will be working in close tandem with the IIT in their respective areas of research. Our lab facilities and intellectual capital will be available to them, but at a cost. Several MNCs and corporates are keen to pitch in”, Kusre explains.



*A new beat: The I Sense being tested in the Nanosniff Technologies lab. Pic/Prashant Waydande*

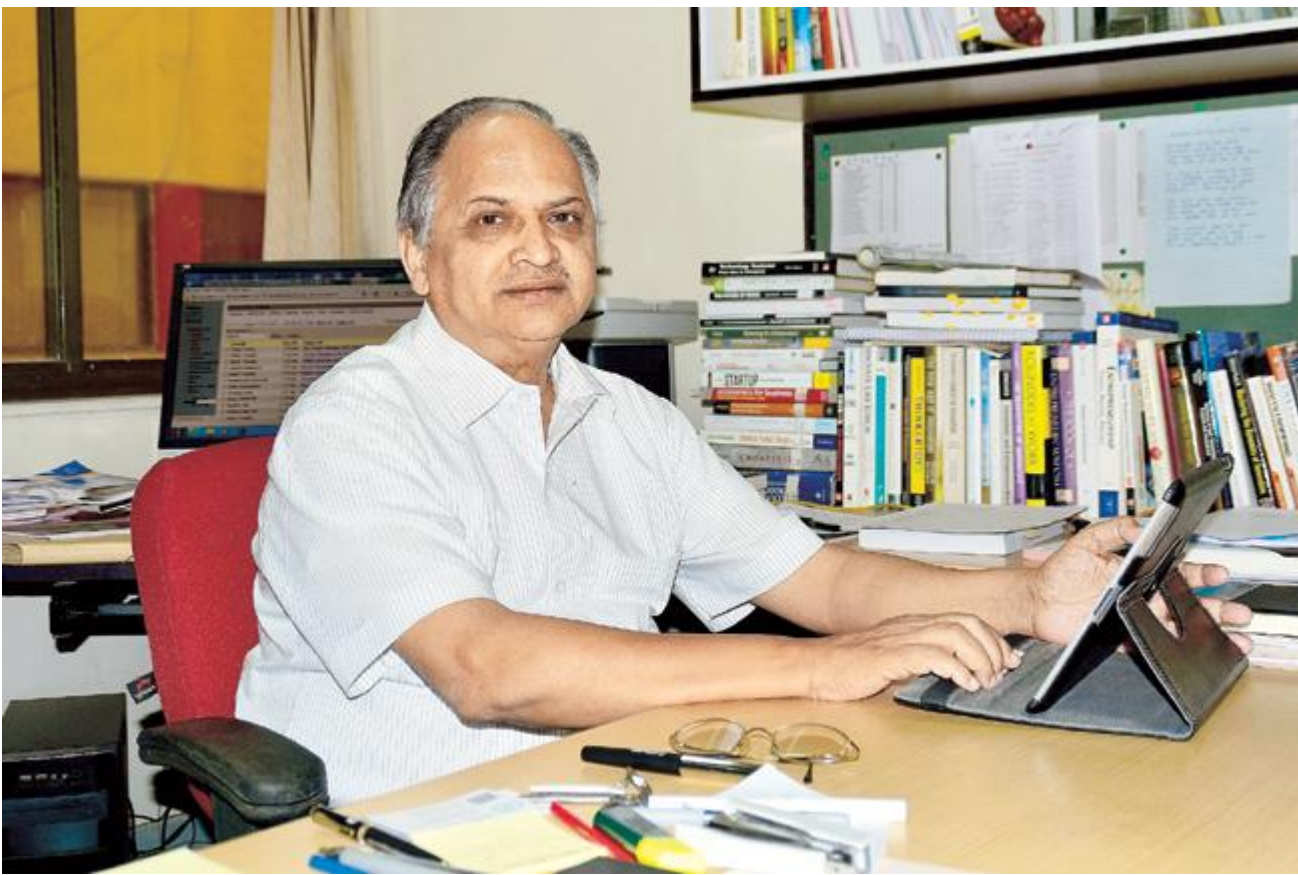
At IIT's incubator, where 17 companies started by IITians are running trials, the air is thick with excitement. Says Nehul Gullaiya, whose start-up Nanosniff Technologies Pvt Ltd, is in incubation mode, "The entrepreneurship centre and research park will make the eco-system very attractive for companies to come in. As it is we want to stay connected with the IIT for the state-of-the-art research and lab facilities and the mentorship. Plus there is a huge workforce of interns available in the form of students".

Adds Sachin Kumar, a fourth-year B Tech student who won the Eureka, Asia's largest business plan competition, this year: "I am very excited because now we will be able to move our ideas from paper to prototypes and tangible products." His B Plan for a small compact highly efficient solar energy lamp, 'Idiya' won the best price at the competition. Sachin and his partner Chandresh Kumar have already received a supply order for 70,000 units of 'Idiya' from South Africa, Namibia, Lesotho and Swaziland.

### **Future growth**

The importance of the entrepreneurship centre for the future growth of industry cannot be stressed enough. In 1999, a team from the University of Texas had come-a-visiting to the Indian Institute of Management Ahmedabad (IIM-A), when they popped a question to the Institute's Director, Jahar Saha: Why can't India come up with an Apple or a Bill Gates? How could Gates create Microsoft out of nothing? What is it that India lacks? Is it ideas? Despite the presence of venture capitalists, why are things not moving the way they should? Addressing itself to these queries, IIM-A, in the course of its discussions with innovators across the board, discovered that the problem did not lie on the ideas front. Instead it was the absence of an intermediary or an incubator-like-facility that could enable innovators to bring their ideas to fruition that was the hitch. An idea needs to be nurtured through various stages before it gets fully executed. This requires infrastructure, guides and mentors, research and data facilities, technology labs to test feasibility, networking, marketing and organisational support among other things.





*Innovation trigger: Prof Anand Kusre. Pic/Prashant Waydande*

Moreover, even though students on the campus are bustling with ideas, they lack the necessary knowhow on finance and cash flows, marketing, business plans, team work, communication skills, etc. The centre hopes to bridge the gap, says Prof Milind Atrey, who heads the institute's Society for Innovation and Entrepreneurship which houses the incubator facility.

### **The sound of music**

#### ***SensiBol Audio Technologies***

Imagine a software device that tells you just how well you sing in a detailed analytical sort of way? Well that's exactly what Sensibol specialises in.

Started by a bunch of IIT students, the company is currently running trials for an audio technology and software that analyses your singing talent.



*Lead, Kindly light: Chandresh Kumar and Sachin Kumar with their invention, the solar-powered lamp 'Idiya'. Pic/Prashant Waydande*

According to founder-director Dr Vishweshwara Rao, “ we extract information from the audio with a system that tells us how well you sing by analysing it on various counts. It has tremendous application in the music entertainment industry. Like for instance, the auditions of the Indian Idol are flooded with entries. The software can be used to shortlist the better entries and eliminate the really bad ones thereby saving on time and effort”.

The start up is currently in the process of signing deals with two big music company labels and a TV music channel worth Rs 50 lakh each.

SensiBol was started with a one crore investment from Indian Angels in return for an equity. And now it's scaleable.

## **Health at heart**

### ***Nanosniff Technologies Pvt Ltd***

Can we detect a heart attack just before it happens? 'I Sense', an infarction detection device, will soon hit the markets if the field trials of this start-up are anything to go by. Says Nehul Gullaiya, chief operating officer, Nanosniff Technologies, “We are almost on the verge of launching it. There are several markers and machines in the market today that can help indicate that you are a perfect candidate for a heart attack, but none really that will tell you that you are just about to have one.”



The company started by a group of IITians specialises in devices like sensors and Integrated Circuits or ICs. “Thanks to the 200 crore Nano technology Research facility available at IITB, we’ve been able to innovate and come up with this new device”.

He explains that Nanotechnology will be the next big thing the world over. They will shortly also be launching a new device to detect bombs and explosives which will be available for the Indian Army, the National Security Guard, and the police.

### **Boosting innovation**

The Desai Sethi Entrepreneurship Centre and The IIT Research Park features:

- >> R 6 crore from Syntel co-founders Bharat Desai and Neerja Sethi
- >> Rs 100 crore grant from HRD Ministry for the Research Park
- >> The centre will launch new undergraduate, post-graduate and PHd diploma programmes in entrepreneurship. These will include courses in innovation and creativity, growing start up, entrepreneurial marketing, new venture creation, valuation of new ventures, lean start-ups, etc.
- >> Research labs in various disciplines to enable students to innovate
- >> The centre will provide mentorship, micro-grants and networking opportunities
- >> The courses will leverage renowned faculty from international institutes
- >> New programmes in emerging technology areas like Biotech, Nanotech, Materials and Green Economy.
- >> Proof of Concept Testing will enable students to quickly convert their ideas into tangible products and services
- >> Networking and alliances with academic institutions and agencies across the world.
- >> The Research Park will be spread across a sprawling 2 lakh sq ft area space on the periphery of the IIT campus and will house over 200 R and D units.
- >> Private companies and corporates will collaborate with IIT for research facilities, mentorship, intellectual capital and interns from the student pool, but at an expense.

- See more at: <http://www.mid-day.com/articles/iit-bombay-to-launch-rs-100-crore-research-park-in-july/15154073#sthash.KJUtyBz.dpuf>

## Lifeline to 44 deemed varsities

BASANT KUMAR MOHANTY

**New Delhi, March 11:** The University Grants Commission, India's higher education regulator, has thrown a lifeline to 44 deemed universities found unworthy by an expert panel over four years ago.

The UGC has asked each of the 44 institutions to furnish up-to-date information about their functioning. Besides, they will get a chance to offer their views on the findings of the review panel headed by P.N. Tandon.

The Tandon committee, set up by the human resource development ministry in 2009, had examined 126 deemed universities and found 44 of them "unworthy". Another 44 were found deficient on many counts while the performance of 38 was found satisfactory.

The panel recommended immediate withdrawal of deemed university status from the institutions found unworthy.

But the 44 went to the Supreme Court, which in January asked the government to seek the UGC's comments on the findings of the Tandon committee.

UGC chairman Ved Prakash told a commission meeting at the end of last month that the regulator had written to all the 44 to offer their defence within two weeks.

Once all the replies come in, the commission will examine them and suggest what action should be taken, a member said.

The commission will meet in the last week of this month. It is expected to take a decision after examining the Tandon committee report, the report of an officers' committee that was set up by the HRD ministry in 2011 to look at the Tandon report, the UGC's own review of the deemed universities' academic performance in 2009, and the response of individual deemed universities.

The Supreme Court had on January 21 directed the UGC to give its advice within eight weeks, but the commission will seek another month.

Former UGC secretary R.K. Chauhan said many of the 44 deemed universities had complained that the Tandon committee had not given them adequate opportunity to explain their strengths and achievements. "The UGC has taken the right approach in giving a chance to the deemed universities to furnish up-to-date information. Their comments will enable UGC to take a fair decision," Chauhan said.

A senior HRD ministry official said the UGC's comments would complete the process of review of these institutions. "UGC is a major stakeholder when it comes to grant deemed university status to any institution. The Tandon committee had not sought the UGC's views while reviewing the deemed universities. After the UGC's comments, the review will be complete. We will submit the UGC report to the Supreme Court," the official said.

The Tandon committee had assessed each institute on 45 marks. Institutions that scored less than 15 were

labelled “unworthy”.

These 44 institutions were originally colleges and were later granted deemed university status by the government. The apex court has said that the future of the nearly two lakh students at these institutions should not be affected in case of a decision against the deemed universities.

The UGC meeting yesterday also decided to relax the eligibility criteria for OBC candidates to sit for the National Eligibility Test. OBC candidates will require 50 per cent marks in post-graduation to appear for NET, down from 55 per cent at present.

[http://www.telegraphindia.com/1140312/jsp/nation/story\\_18071866.jsp#Ux\\_olrT\\_EZ8](http://www.telegraphindia.com/1140312/jsp/nation/story_18071866.jsp#Ux_olrT_EZ8)

## Graduate Aptitude Test in Engineering: UGC to re-implement PG scholarship

*Vishwas Kothari, TNN | Mar 12, 2014, 05:46 AM IST*

PUNE: Engineering graduates, who have qualified the Graduate Aptitude Test in Engineering (GATE), can now avail of a vital scholarship from the University Grants Commission (UGC) to pursue their postgraduate (PG) studies.

The UGC executive body, which met on February 27, has approved a proposal to re-implement the PG scholarship in all universities and colleges for master of engineering (ME) and master of technology (MTech) courses for the GATE-qualified candidates.

“A decision regarding a similar PG scholarship for other courses will be taken soon,” the commission resolved at the meeting, details of which have been posted on the UGC website.

Dean of University of Pune’s engineering faculty, Gajanan Kharate, told TOI, “The move may have been spurred by the Supreme Court judgment of April 2013 that has taken away much of the regulatory powers of the All India Council for Technical Education (AICTE), in favour of the UGC.”

According to Kharate, GATE-qualified postgraduate engineering students were receiving a scholarship of Rs 8,000 per month from the AICTE. “However, with the change of regulatory powers, the UGC may have now decided to re-implement the scholarship scheme for ME/MTech students.” Even otherwise, a student is barred from claiming scholarships from two different sources, he added.

The GATE, which is jointly conducted by the Indian Institutes of Technology (IITs) and the Indian Institute of Science, is the qualifying exam for admission to postgraduate engineering studies at these premier institutions and some central government-funded institutions. “Over 80 per cent of the GATE-qualified students go to these premier institutions while the remaining go to the leading private engineering colleges,” Kharate said.

A valid GATE score is essential for obtaining financial aid for master’s programs and direct doctoral programs in engineering, technology, architecture and doctoral programs in relevant branches of science in institutes supported by the HRD ministry and other government agencies.

Last year, a total of 9,84,855 candidates appeared for ‘GATE 2013’ and 1,36,699 of them qualified the exam. The success rate was 13.88%.

Of the qualified candidates, 39.75% were women and 60.25% were men.

The online ‘GATE 2014’ was held between February 2 and March 2. The results are to be declared on March 28.

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## **IIT-Guwahati student commits suicide**

**GUWAHATI:** A student of the Indian Institute of Technology (IIT) Guwahati on Tuesday committed suicide by hanging himself from the ceiling fan in his hostel room, police said. The student was identified as SM Shoib Ahmed, a M.Sc II semester student, was pursuing Mathematics at the premier institute and hailed from North 24 Parganas district. Police said that the student was found hanging by the ceiling fan in Dibang hostel (room no. 204) on Tuesday morning by his classmates. Classmates of Shoib told police that he was apparently suffering from stress and depression.

# Fall in love with science

Gauri Kohli

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If you are love science and technology and want to come up with innovative solutions to day-to-day problems, you can go work on your ideas at the National Science Museum in your city.

The National Council of Science Museums (NCSM), an autonomous society under the ministry of culture, is taking several steps to encourage students to take up research and come up with innovative projects by providing them resources to train and experiment.

One such step is its collaboration with Intel India to launch the National Science, Technology, Engineering, and Mathematics (STEM) Acceleration Programme recently. The programme focuses on initiatives aimed towards promoting creativity, innovation and a do-it-yourself attitude among students. This collaboration would work to create the world's first Galileo Corner at the Innovation Centre of NCSM at

the National Science Museum in New Delhi.

GS Rautela, director general, NCSM, says, "With such initiatives, we try to help them demystify technology and unleash their innovative capacities. We give them a platform to take their ideas to the next level, participate in competitions, attend lectures and exhibitions and also interact with experts. We have established 60 innovation centres across India in three years."

NCSM administers 25 science

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GS RAUTELA, director general, NCSM

centres/museums/planetariums across the country.

In addition to development of science centres/museums, NCSM strives to communicate science and educate masses by its mobile science exhibitions, lectures, demonstrations, training and workshops. "The school system in our country doesn't encourage problem-solving. We have set up information resource centres, robotics labs, ideas labs, an ideas box and a problem corner at the museums. A National Innovation Festival held annually encourages students to showcase their innovations. Students can also become members of our Innovation Hub, facility aimed at supplementing formal school education for seeking new ways to bring innovative science teaching to them," adds Rautela.

In 2013-14, NCSM is creating dedicated spaces for innovation-centric activities by the youth in five of its major science museums/centres in Guwahati, Mumbai, Bangalore, Kolkata and New Delhi.

## Regulating stem cell therapy

**A** revised set of guidelines on stem cell research was recently released by the Indian Council of Medical Research and the Department of Biotechnology, seven years after an earlier one was issued. Despite claiming that the revision was necessitated by a need to “reflect new scientific and clinical findings” that have changed the landscape of stem cell research being undertaken in the country and its possible translation, there is a glaring omission that reflects a lack of application of the mind. The guidelines make it abundantly clear that any use of stem cells in patients except to treat various haematological, immunological and metabolic disorders using haematopoietic stem cells should, by default, be considered as clinical trials. The exemption is on the grounds that the use of haematopoietic stem cells to treat the said disorders has been “established as a standard of medical care.” Of course, the use of bone marrow (containing haematopoietic stem cells) to treat diseases like leukaemia has been in vogue in India since the 1960s. But what has been overlooked in the new guidelines is that treating damaged corneas by limbal transplantation for limbal stem cell deficiency should also be considered as an established method of care; limbal stem cells are transplanted from the healthy eye to the damaged eye of the same patient to treat an affected cornea. No other alternative method is currently available to treat such cases. For the last few years, a handful of tertiary eye hospitals in India have been treating such cases using limbus stem cells; since 2001, one institute alone has treated nearly 1,000 patients. Though the use of limbus stem cells is not as old as haematopoietic stem cells, about 1,500 patients with corneal damage have been treated so far; there is also sufficient evidence to prove its safety. Hence, there is a compelling reason for the ICMR and the DBT to apply the same yardstick and correct the anomaly.

Though belated, the decision to call all the untested “therapies” offered to gullible people as clinical trials is indeed commendable. This would end the rampant exploitation of patients by some doctors. Many untested and unproven stem cell treatments are being offered as a magic bullet for many types of diseases and conditions. Similarly, several untested techniques to separate, grow and expand specific stem cells are available in the country. Besides failing to produce the promised benefits, there is a real possibility of causing greater harm to patients when stem cells are manipulated in the laboratory. But with many clinics and hospitals already offering stem cell therapy for a wide variety of conditions, it remains to be seen how swiftly they can be regulated under the new guidelines.



# Supercomputing facility at NIT Silchar soon

Correspondent

SILCHAR, March 11 – At a time when the Government of India has the aim to produce the fastest supercomputer by 2017, the National Institute of Technology Silchar will certainly have the privilege to become the first among the NITs in the country to have a centre for high performance supercomputer (HPC).

In the words of Prof NV Deshpande, Director of NIT Silchar, the centre will be inaugurated on April 5. Speaking to the media, he said the Financial Advisor of MHRD, Yogendra Tripathi will inaugurate the centre at the NIT campus.

“This would be the first centre of supercomputing among all the NITs in the country and would add fillip to the efforts taking the study of computer science in the superlative stage,” claimed Prof Deshpande. He said that this is a project of Rs 4 crore.

He also narrated how NIT Silchar has grown from strength to strength in the last two years and said, “as a director of the institute which is situated at a remote corner of the country infested with manifold geo-political hurdles, I am happy to see it grow. The institute now is treading onto subjects like management and civil services which is necessary for overall development.” But the director was concerned over the fact that despite all the positive aspects the institute has not been able to get students for its postgraduate programmes.

Meanwhile, reacting on the issue of opening an extension campus for the postgraduate courses in computer science and research activities outside Barak Valley, which created an apprehension among the people here that NIT Silchar might become a ‘skeletal institute’, if the courses are shifted after the news was reported in the local dailies recently, Prof Deshpande clarified that there was no intention of such an initiative.

He said that the thought was to expand the institute outside Silchar so that better facilities could be availed and everything was at the preparatory stage. However, realising the popular sentiment, he has withdrawn the plan of extension campus and has made his mind clear to the concerned authorities as well.

“With the aim to improve the quality of education, I took the decision to seek opinion from the faculty. I was not aware of the intricacies of the social engineering in the state and not to hurt the sentiments of the local population. On behalf of the institute, I regret for contemplating the idea that created a commotion and make it clear that the plan has been withdrawn,” he said.

<http://www.assamtribune.com/scripts/detailsnew.asp?id=mar1214/state06>